## A. CLASSIFICATION OF SUBJECT MATTER IPC 7 B30B11/20

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) IPC 7 B30B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

·	
GB 1 599 003 A (REFFO 0 MECC SNC) 30 September 1981 (1981-09-30) cited in the application	1-10
page 1, line 84 -page 2, line 7; figures	18
US 2 887 718 A (CURRAN JOHN B ET AL) 26 May 1959 (1959-05-26) figure 3	18
FR 2 591 438 A (BELLEFROID CHARLY VINCENT) 19 June 1987 (1987-06-19) figures 1-3	11,12,17
US 4 770 621 A (SCHAFFNER HANSPETER ET AL) 13 September 1988 (1988-09-13) cited in the application figure 3B	11,12,17
	30 September 1981 (1981-09-30) cited in the application page 1, line 84 -page 2, line 7; figures  US 2 887 718 A (CURRAN JOHN B ET AL) 26 May 1959 (1959-05-26) figure 3  FR 2 591 438 A (BELLEFROID CHARLY VINCENT) 19 June 1987 (1987-06-19) figures 1-3  US 4 770 621 A (SCHAFFNER HANSPETER ET AL) 13 September 1988 (1988-09-13) cited in the application

X Further documents are listed in the continuation of box C.	Patent family members are listed in annex.				
Special categories of cited documents:      A* document defining the general state of the art which is not considered to be of particular relevance      E* earlier document but published on or after the international filing date      'L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)      'O* document reterring to an oral disclosure, use, exhibition or other means      'P* document published prior to the international filing date but later than the priority date claimed	<ul> <li>'T' later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention.</li> <li>'X' document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone.</li> <li>'Y' document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.</li> <li>'&amp;' document member of the same patent family</li> </ul>				
Date of the actual completion of the international search  22 January 2004	Date of mailing of the international search report  0.9. 07. 2004				
Name and mailing address of the ISA  European Patent Office, P.B. 5818 Patentiaan 2	Authorized officer				
NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl. Fax: (+31-70) 340-3016	Belibel, C				

C.(Continu	BLION) DOCUMENTS CONSIDERED TO BE RELEVANT	
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 293 295 A (VAN DEUREN FRANCISCUS) 6 October 1981 (1981-10-06) figures	13-16
X .	US 3 207 091 A (CUNNINGHAM ROBERT A) 21 September 1965 (1965-09-21) column 2, line 44 -column 35; figures 1,2	13,14
<b>(</b> .	US 2 063 404 A (SELMAN JOHN L) 8 December 1936 (1936-12-08) figures 1,2	13
1	US 4 979 887 A (GROEBLI WERNER ET AL) 25 December 1990 (1990-12-25) cited in the application abstract; figures	1-10
	US 3 742 750 A (HEESEN T) 3 July 1973 (1973-07-03) cited in the application abstract; figures	1-10
	US 4 226 578 A (GROEBLI WERNER ET AL) 7 October 1980 (1980-10-07) abstract; figures	1-3,6-8
	NL 9 302 236 A (CPM EUROP B V) 17 July 1995 (1995-07-17) figures	11,12
ð	EP 0 956 943 A (CONSOLIDATED PROCESS MACHINERY) 17 November 1999 (1999-11-17) figures	11
	WO 91 02644 A (TNO) 7 March 1991 (1991-03-07) cited in the application abstract; figures	13
·	US 3 534 634 A (KAWANAMI SHUNPEI) 20 October 1970 (1970-10-20) figures	13,15,16
•	<del></del>	
- 1		
÷		
.		

## INTERNATIONAL SEARCH REPORT

ation on patent family members

PCT/CH 03/00488

		<del></del>	<del></del>			7 CH 037 00468
	Patent document ed in search report		Publication date		Patent family member(s)	Publication date
GB	3 1599003	Α	30-09-1981	IT	1082936 B	21-05-1985
				DE	2756647 A1	16-11-1978
			•	DK	· 57878 A	,B, 14-11-1978
				FR	2390275 A1	08-12-1978
US	2887718	A	26-05-19 <b>59</b>	СН	347606 A	15-07-1960
				GB	8147 <b>47</b> A	10-06-1959
FR	2591438	Α	19-06-1987	ES	8700082 A1	01-01-1987
		•		FR	2591438 A1	19-06-1987
				TI	1213406 B	20-12-1989
· US	4770621	Α	13-09-1988	AT	70774 T	15-01-1992
				AT	78432 T	15-08-1992
				DE	3775423 D1	06-02-1992
				DE	3780650 D1	27-08-1992
			1	EP	0231764 A2	12-08-1987
				EP	0371519 A2	06-06-1990
				ES ES	2028793 T3 2034571 T3	16-07-1992
				GR	20345/1 13 3003449 T3	01-04-1993 17-02-1993
				GR	3005739 T3	07-06-1993
				ÜS	4861529 A	29-08-1989
UŞ	4293295	Α	06-10-1981	NL NL	7705231 A	14-11-1978
				DE	2820691 A1	23-11-1978
				DK	205178 A	12-11-1978
				ES	469740 A1	01-01-1979
				FR	2390276 A1	08-12-1978
				GB IT	1576691 A 1094611 B	15-10-1980 02-08-1985
US	3207091	Α	21-09-1965	NONE		
US	2063404	Α	08-12-1936	NONE		
US	4979887	Α	25 <b>-</b> 12-19 <b>90</b>	DE	3743037 A1	29-06-1989
				AT	80340 T	15-09-1992
			•	DE	3874501 D1	15-10-1992
				EP ES	0320747 A2	21-06-1989
				GR	2035232 T3 3005668 T3	16-04-1993 07-06-1993
us	3742750	 А	03-07-1973	NL ®	700266 <b>5</b> A	27-08-1971
	;=- ••	,,	00 0, 13,3	DE	2108326 A1	09-09-1971
	•	-		DK	129915 B	02-12-1974
				ES	3885 <b>99 A1</b>	01-03-1974
				FR	2078940 A5	05-11-1971
				GB	1342908 A	10-01-1974
US	4226578	A	07-10-1980	DE	2852420 B1	19-06-1980
	•			CA	1114230 A1	15-12-1981
				ES	240320 U	01-07-1979
				GB NI	2044378 A ,	
				. NL 	79086 <b>92 A</b>	06-06-1980
	9302236	Α	17-07-1995	NONE		

## INTERNATIONAL SEARCH REPORT nation on patent family members



Patent docu cited in search		Publication date		Patent lamily member(s)		Publication date
EP 09569	43 . A	17-11-1999	EP	0956943	A1	17-11-1999
WO 91026	44 A	07-03-1991	NL .	8902105	 A	18-03-1991
	•	•	AT	137442	T	15-05-1996
		•	CA	2064858	A1 '	22-02-1991
•			DE	69026827	D1	05-06-1996
			DE	69026827	T2	28-11-1996
•			' DK -	489046	T3	12-08-1996
			EP	0489046	A1	10-06-1992
			ES	2089024	T3	01-10-1996
			WO	9102644	Al	07-03-1991
			US	5792485	A	11-08-1998
US 35346:	34 A	20-10-1970	NONE			